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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,763	09/15/2003	Norman D. Staller	**BA-0341	1512
23377	7590	06/24/2009	EXAMINER	
WOODCOCK WASHBURN LLP			GEBRIEL, SELAM T	
CIRA CENTRE, 12TH FLOOR				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/662,763	STALLER, NORMAN D.	
	Examiner	Art Unit	
	SELAM T. GEBRIEL	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 25 February 2009.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-30 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-30 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application

6) Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 02/25/2009 have been fully considered but they are not persuasive.

Applicant argument on page 11 and 12 regarding claim 1 states "a skilled artisan would not have looked to the Pizzuti patent, which discloses bellows for a film-based folding camera, to remedy the deficiency in the Shimizu patent, which discloses a still video camera, because electronic image devices, such as electronic cameras. As described in applicant's disclosure, electronic imaging devices capture images differently from film-based cameras, specification paragraph [0002]. in electronic cameras, the light sensed at each pixel is integrated over a period of time. *Id.* The problems encountered in pixel integration include controlling the amount of time each pixel is integrated, controlling fill flash where objects in the scene are located at various distances from the camera, and balancing illumination of between natural and artificial light sources in the pixel integration, paragraphs [0002] and [0003] . Applicants respectfully submit that a skilled artisan attempting to solve issues dealing with pixel integration of digital cameras would not turn to film-based camera because film-based cameras do not perform pixel integration."

The examiner respectfully disagrees for the following reason. One skilled in the art would combine Pizzuti patent to remedy the deficiency in Shimizu patent. From Col 7 Lines 65 - 68 to Col 8 Lines 1 – 13, Pizzuti disclose an exposure controller that controls a flash unit in response to ambient scene brightness level and camera to scene

distance to control a variable amount of fill flash energy. This is done by the exposure unit controlling a strobe or flash unit that is capable of outputting a variable amount of flash. Therefore one ordinary skilled in the art could easily combine the technique of exposure control taught by Pizzuti regardless whether is used for a film based camera and use it in an electronic camera to serve the same purpose. [The Examiner noted that most of the limitations are presented using the phrase "adapted to and adapted for" in the limitations. It is noted by the Examiner that the term "adapted to and adapted for" is non-limiting and therefore has not been given patentable weight during examination of the claims on their merits. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. MPEP §2106].

Applicant argument on page 12 regarding claim 1 states "the combination of references does not achieve the applicants' claimed devices and methods, as set forth in claims 1-3 and 7-30. Applicant submits that the Shimizu patent does not disclose a scanning aperture shutter, as required in claim 1. In particular, the scanning aperture shutter of the electronic camera of claim 1 is not only able to control light energy received by the electronic image capture device from said image scene, but also to control the light energy received and sensed by the photocell from the image scene. In this manner, the light energy sensed by photocell according to claim 1 is analogous to the light energy received by the image capture device. Applicants further submit that the cited portions of the Pizzuti patent fail to overcome the deficiency of the Shimizu patent, and the Pizzuti patent is not cited for that purpose."

The examiner respectfully disagrees for the following reasons. In column 3 lines 1 - 10 Shimizu discloses “The control unit 20 carries out an AE calculation to obtain an aperture value (Av) and a shutter speed (Tv), and when a release switch 22 is turned ON, the control unit 20 drives the aperture and shutter unit 14 through an aperture and shutter drive circuit 24, in accordance with the Av value and the Tv value. Note that the control unit 20 is provided with a function by which system control is carried out for the operation of the whole camera, in addition to the AE calculation and the drive for the aperture and shutter unit 14”. The control unit 20 drives the aperture and shutter unit 14 through an aperture and shutter drive circuit 24, in accordance with the Av value and the Tv value, therefore the aperture and shutter unit 14 is driven by the shutter drive circuit to control light energy received by the image capturing device and photosensor.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1 – 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (US 5,049,911) in view of Pizzuti (US 4,395,102).

Regarding claim 1, Shimizu discloses an electronic camera (Figure 1, Col 2 Line 51 - 53), comprising:

An electronic image capture device (CCD imaging device 10) adapted for capturing an image scene (Col 2 Lines 57 – 58);

A photocell (Photosensor 16) adapted for sensing light energy received from said image scene (Col 2 Line 63 – 64);

A scanning aperture shutter (An aperture and shutter 14 having aperture blades and shutter blades and shutter drive circuit 24) located to control light energy received by said electronic image capture device and the photocell (Col 2 Line 60 – 62 and Col 3 Line 1 – 10); and

An exposure control system (Control unit 20, Col 3 Line 1 – 10) responsive to said photocell (Photosensor 16) and operatively connected to said scanning aperture shutter (Aperture and shutter 14), Wherein said exposure control system is adapted to control said scanning aperture shutter (Col 3 Line 1 – 10, “The control unit 20 carries out an AE calculation to obtain an aperture value (A_v) and a shutter speed (T_v), and when a release switch 22 is turned ON, the control unit 20 drives the aperture and shutter unit 14 through an aperture and shutter drive circuit 24, in accordance with the A_v value and the T_v value. Note that the control unit 20 is provided with a function by which system control is carried out for the operation of the whole camera, in addition to the AE calculation and the drive for the aperture and shutter unit 14’) and

Shimizu does not explicitly disclose the exposure control system or the control unit 20 adapted to control a flash unit in response to sensed light energy at said photocell to control **a variable amount of fill flash** energy received by said electronic image capture device in relation to ambient light energy received by said electronic image capture device during image capture.

Pizzuti disclose the exposure control system (Automatic exposure control system Col 7 Line 66) adapted to control a flash unit (Strobe unit 78 Col 7 Line 65) in response to sensed light energy at said photocell (Ambient scene brightness level and camera to

scene distance Col 8 Line 3 – 5) to control a variable amount of fill flash energy (the strobe unit 78 is of the **variable output type** which is automatically fired and quenched) received by said electronic image capture system in relation to ambient light energy received by said electronic image capture system during image capture (Col 7 Line 65 – 68 to Col 8 Line 1 – 13).

Therefore it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the exposure control system of Shimizu as to control a flash unit in response to sensed light energy at said photocell to control a variable amount of fill flash energy received by said electronic image capture device in relation to ambient light energy received by said electronic image capture device during image capture with an exposure system control system as taught in Pizzuti. The motivation to do so is that to illuminate the scene directly to soften dark shadows caused by downwardly directed light or to balance the illumination in scenes having high lighting contrasts, such as daylight photography where the primary subject is situated in a shadow.

Regarding claim 2, Shimizu in view of Pizzuti further discloses the camera of claim 1, wherein said exposure control system is adapted to illuminate said flash unit once a predetermined amount of ambient light energy is sensed by said photocell (Pizzuti disclose exposure control system adapted to automatically fire and quench at appropriate time during the course of an exposure cycle to provide primary scene lighting or auxiliary for fill flash exposures Col 7 Line 65 – 68 to Col 8 Line 1 – 13).

Regarding claim 3, Shimizu in view of Pizzuti further discloses the camera of claim 2, wherein said exposure control system is adapted to extinguish said flash unit once a predetermined amount of infrared spectrum energy is sensed by said photocell during flash unit illumination (Pizzuti, disclose exposure control system adapted to automatically fire and quench at appropriate time during the course of an exposure cycle to provide primary scene lighting or auxiliary for fill flash exposures Col 7 Line 65 – 68 to Col 8 Line 1 – 13).

Regarding claim 7, Shimizu in view of Pizzuti further discloses the camera of claim 1, wherein said flash unit is constructed integrally with said camera (Pizzuti, Strobe unit 78 Col 7 Line 65).

4. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (US 5,049,911) in view of Pizzuti (US 4,395,102) in further view of Farrington (US 4,941,011).

Regarding claim 4, Shimizu in view of Pizzuti disclose camera of claim 1 having a photocell.

Shimizu in view of Pizzuti does not explicitly discloses a photocell includes a visible spectrum photocell and an infrared spectrum photocell and further wherein, Said exposure control system is adapted to use said visible spectrum photocell to sense ambient light energy received from said image scene prior to illumination by said flash unit and to use said infrared photocell for sensing infrared spectrum energy received from said image scene during illumination by said flash unit

Farrington discloses a photocell (Figure 1, Element 32 and 28) includes a visible spectrum photocell (A visible light photodetector 30, Col 3,) and an infrared spectrum photocell (An infrared photodetector 26), and further wherein, Said exposure control system (Figure 1 Exposure Control Electronic Module 48) is adapted to use said visible spectrum photocell to sense ambient light energy received from said image scene prior to illumination by said flash unit and to use said infrared photocell for sensing infrared spectrum energy received from said image scene during illumination by said flash unit (Farrington, Col 7, Line 35 – 53 and Col 6 Line 55 – 68 to Col 7 Line 1 - 12).

Therefore it would have been obvious to one ordinary skilled in art at the time the invention was made to modify the photocell and exposure control system of Shimizu and Pizzuti with the photocell and exposure control system as taught in Farrington where the photocell including a visible light photodetector 30 for sensing ambient light energy and an infrared photodetector 26 for sensing infrared light and wherein the exposure system uses said visible light photodetector 30 sense ambient light energy received from said image scene prior to illumination by said flash unit and to use said infrared photocell for sensing infrared spectrum energy received from said image scene during illumination by said flash unit. Therefore having separate photocells for shorter wave lengths (Visible Light) and for longer wavelength (infrared) and controlling the photocells accordingly would have the advantage of controlling duration of photographic exposure more effectively.

Regarding claim 5, Shimizu in view of Pizzuti in further view of Farrington disclose the camera of claim 4, wherein said scanning aperture shutter includes

separate apertures for said image capture device, said visible spectrum photocell and said infrared spectrum photocell (Farrington, Col 3, Line 15—68 to Col 4, Line 1- 4 and See Figure 1 scanning aperture 18 includes for example opening 24 is for visible light sensor and 28 is for non visible sensor and the scanning aperture 18 also includes an aperture for image capturing device).

5. Claim 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (US 5,049,911) in view of Pizzuti (US 4,395,102) in further view of Omura (US 5,943,515).

Regarding claim 6, the camera of claim 1, Shimizu in view of Pizzuti disclose wherein said exposure control system is adapted to generate control signals for a flash unit (Pizzuti Col 7 Line 65 – 68 to Col 8 Line 1 – 13)

Shimizu in view of Pizzuti does not explicitly disclose the flash unit being a detachable flash unit.

Omura disclose a detachable flash unit (External flash unit Col 5 line 21 - 24)

Therefore it would have been obvious to one ordinary skilled in the art at the time invention was made to modify the flash unit of Shimizu and Pizzuti with an external or detachable flash unit as taught in Omura. The motivation to do so is that an external flash offers much more versatility and power than a fixed position, built-in flash. External flash units provide increased flash range, more control of light direction, faster recycle times and they virtually eliminate red eye.

Regarding claim 8, Claim 8 is rejected under claims 1 – 3.

Regarding claim 9, Claim 9 is rejected under claims 1, 4 and 5.

Regarding claim 10, Claim 10 is rejected under claims 1 – 4.

Regarding claim 11, Claim 11 is rejected under claims 1 – 3.

Regarding claim 12, the method of claim 12 is rejected under the apparatus of claims 1 and 2.

Regarding claim 13, the method of claim 13 is rejected under claim 12 the apparatus of claims 1 – 4.

Regarding claim 14, the method of claim 14 is rejected under claims 12 and 13 the apparatus of claims 1 – 4.

Regarding claim 15, the method of claim 15 is rejected under claim 12 and apparatus of claims 1, 4 and 5.

Regarding claim 16, the method of claim 16 is rejected under the apparatus of claims 1 – 3.

Regarding claim 17, Claim 17 is rejected under claim 1.

For the independent claim 17 and for all its dependent claims, Image capturing means for is equivalent to image capturing devices of claim 1. Light control means for is equivalent to scanning aperture shutter of claim 1. Light sensing means for is equivalent to photocell unit of claim 1. Exposure control means for is equivalent to exposure control system of claim 1. Means for discharging a flash of light is equivalent to flash unit of claim 1.

Regarding claim 18, Claim 18 is rejected under claim 17 and claims 1 and 2.

Regarding claim 19, Claim 19 is rejected under claims 17 and 18 and claims 1 and 2.

Regarding claim 20, Claim 20 is rejected under claim 17 and claims 1, 2, and 4.

Regarding claim 21, Claim 21 is rejected under claims 17 and 20 and claims 1, 2, and 4.

Regarding claim 22, Claim 22 is rejected under claim 17 and claims 1 and 6.

Regarding claim 23, Claim 23 is rejected under claim 17 and claims 1 and 7.

Regarding claim 22, Claim 22 is rejected under claim 17 and claims 1 and 6.

Regarding claim 24, Claim 24 is rejected under claims 1 and 3.

For the independent claim 24 and for all its dependent claims, electronic image capturing means for is equivalent to image capturing devices of claim 1. Light control means for is equivalent to scanning aperture shutter of claim 1. Light sensing means for is equivalent to photocell unit of claim 1. Exposure control means for is equivalent to exposure control system of claim 1. Means for discharging a flash of light is equivalent to flash unit of claim 1.

Regarding claim 25, Claim 25 is rejected under claim 24 and claims 1 and 4.

Regarding claim 26, Claim 26 is rejected under claims 24 and 25 and claims 1, 4, and 5.

Regarding claim 27, Claim 27 is rejected under claim 24 and claims 1, 2, and 3.

Regarding claim 28, Claim 28 is rejected under claims 1.

For the independent claim 28, electronic image capturing means for is equivalent to image capturing devices of claim 1. Light control means for is equivalent to scanning aperture shutter of claim 1. Light sensing means for is equivalent to photocell unit of

claim 1. Exposure control means for is equivalent to exposure control system of claim 1.
Means for discharging a flash of light is equivalent to flash unit of claim 1.

Regarding claim 29, the method of claim 29 is rejected under the apparatus of claims 1, 2, and 3.

For the independent claim 29, electronic image capturing means for is equivalent to image capturing devices of claim 1. Light control means for is equivalent to scanning aperture shutter of claim 1. Light sensing means for is equivalent to photocell unit of claim 1. Exposure control means for is equivalent to exposure control system of claim 1.
Means for discharging a flash of light is equivalent to flash unit of claim 1.

Regarding claim 30, Claim 30 is rejected under claims 1, 2, and 3.

For the independent claim 30, electronic image capturing means for is equivalent to image capturing devices of claim 1. Light control means for is equivalent to scanning aperture shutter of claim 1. Light sensing means for is equivalent to photocell unit of claim 1. Exposure control means for is equivalent to exposure control system of claim 1.
Means for discharging a flash of light is equivalent to flash unit of claim 1.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SELAM T. GEBRIEL whose telephone number is (571)270-1652. The examiner can normally be reached on Monday-Friday 7:30 am - 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Sinh can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuan V Ho/
Primary Examiner, Art Unit 2622
/Selam T Gebriel/
Examiner, Art Unit 2622

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